

SC-110

User's Manual



(D/N: 250-0250-E Rev. 1.0)

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- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for help.

FCC CAUTION: To assure continued compliance,(example- use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party: **QMS, Inc.**
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EC Declaration of Conformity

According to EN45014

Manufacturer's Name: QMS, Inc.

Manufacturer's Address: QMS , Inc.

1 Magnum Pass
Mobile, AL 36618
334-633-4300

declare that the product

Model Number : SC-110

conforms to the following Product Specifications:

Emission: EN 50081-1 (1992)
EN 55022 (Class A)
(Conducted Radiated) (1994)

Immunity: EN 60555-2 (Harmonics) (1987)
EN 60555-3 (Flicker) (1987)
EN50082-1 (1992)
IEC 1000-4-2 (ESD) (1995)
IEC 1000-4-3 (RS) (1995)
IEC 1000-4-4 (EFT/Burst) (1995)
IEC 1000-4-5 (SURGE) (1995)

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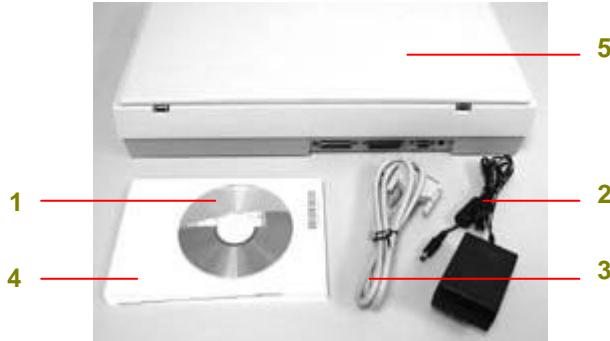
1. INTRODUCTION

Congratulations on your purchase of SC-110.

The SC-110 produces better printing quality and is free from maintenance, compared with traditional copy machines. Its high printing quality, maintenance-free operation and affordability make SC-110 the best convenience copier solution for office.

The following sections introduce the unpacking, hardware and software installation, operation, and maintenance information. Please spend a few minutes reading through them to help you maintain quality scanning results.

Figure 1-1 shows the package contents. Please check all the items against Figure 1-1. If there is any missing or damaged, please contact your nearest dealer immediately for the replacement.



1. Software CD
2. Power Adapter
3. SC-110 Parallel Cable
4. Quick Installation Guide
5. SC-110 main unit

Figure 1-1 SC-110 packing

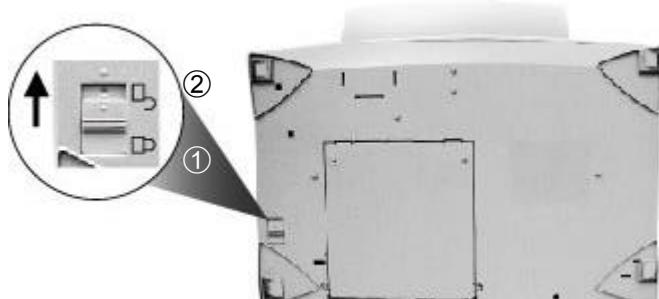
2. INSTALLATION

2.1 PRECAUTIONS

- Keep the SC-110 out of direct sunlight. Direct exposure to the sun or excessive heat may cause damage to the unit.
- Do not install the SC-110 in a humid or dusty place.
- Be sure to use the proper AC power source.
- Place the SC-110 securely on an even, flat surface. Tilted or uneven surfaces may cause mechanical or paper-feeding problems.
- Retain the SC-110 box and packing materials for shipping purposes.

2.2 UNLOCKING THE SC-110

To protect the scanning head from damage during shipment, the SC-110 is designed with a lock switch beneath the main unit. Therefore, before using the SC-110, it is required to unlock SC-110 by moving the lock switch to the *Use* position.(See Figure 2-1)



1. "Shipping" Position
2. "Use" Position

Figure 2-1 **Unlocking the SC-110**

2.3 CONNECTING THE CABLE

2.3.1 CONNECTING SC-110 TO WORK AS A COPIER

Connect the power cable and signal cable as shown below.

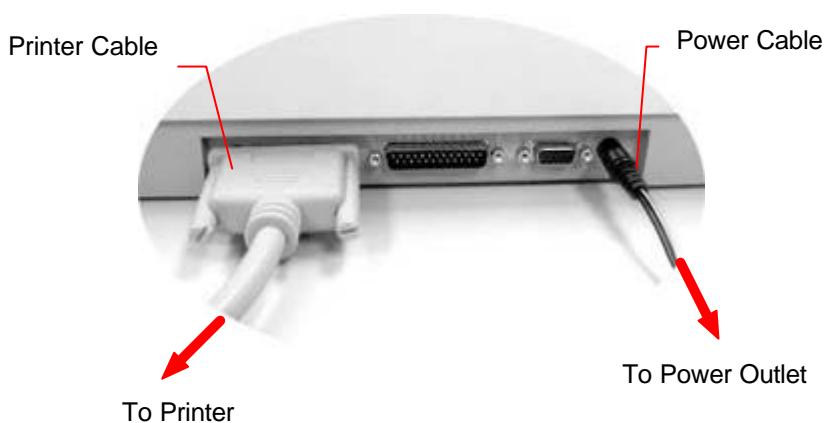


Figure 2-2 Connect SC-110 to a printer

2.3.2 CONNECTING SC-110 TO WORK AS A SCANNER/COPIER

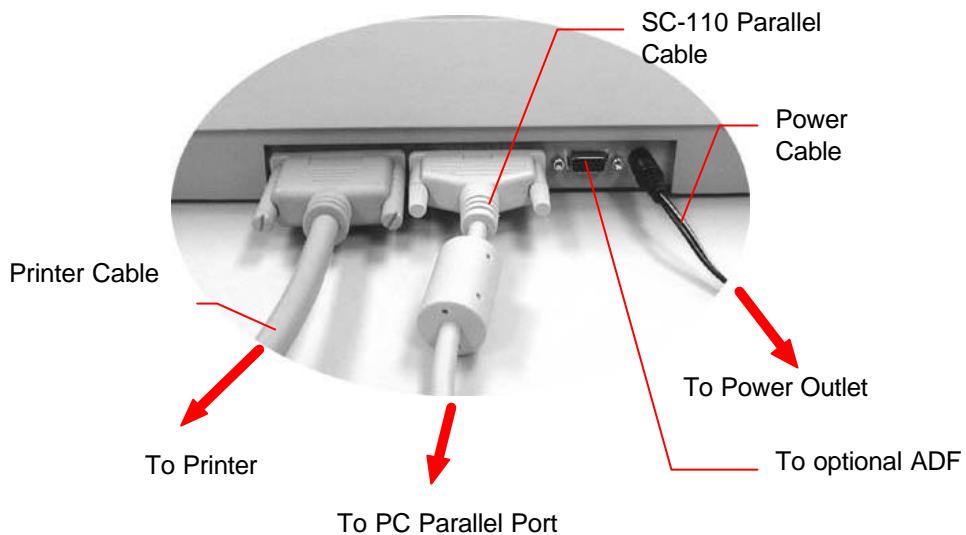
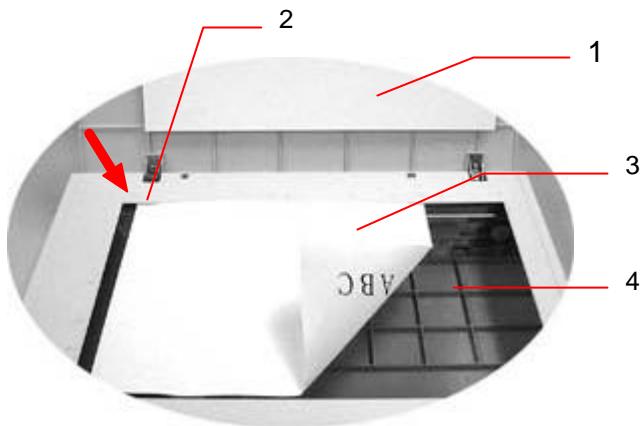


Figure 2-3 SC-110 Cable Connection

2.4 DOCUMENT PLACEMENT

As shown in Figure 2-4, place the document on the glass face (text) down.

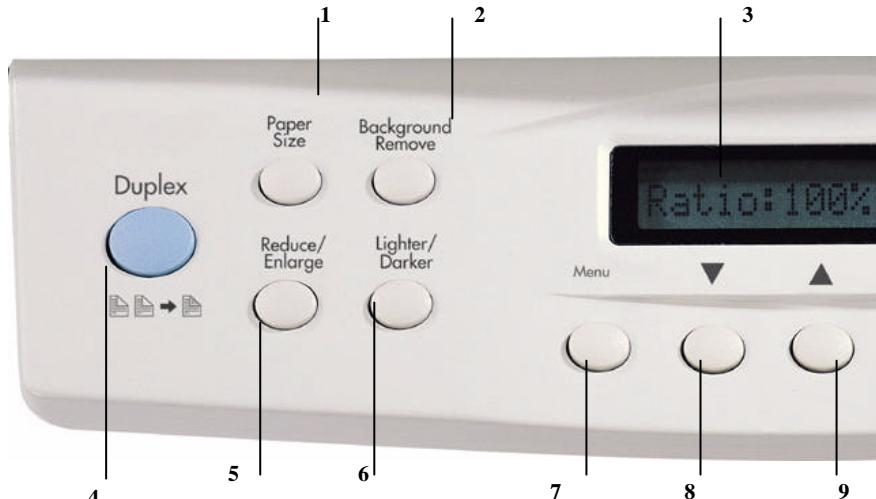


1. Document Cover
2. Home Position Mark
3. Document
4. Document Glass

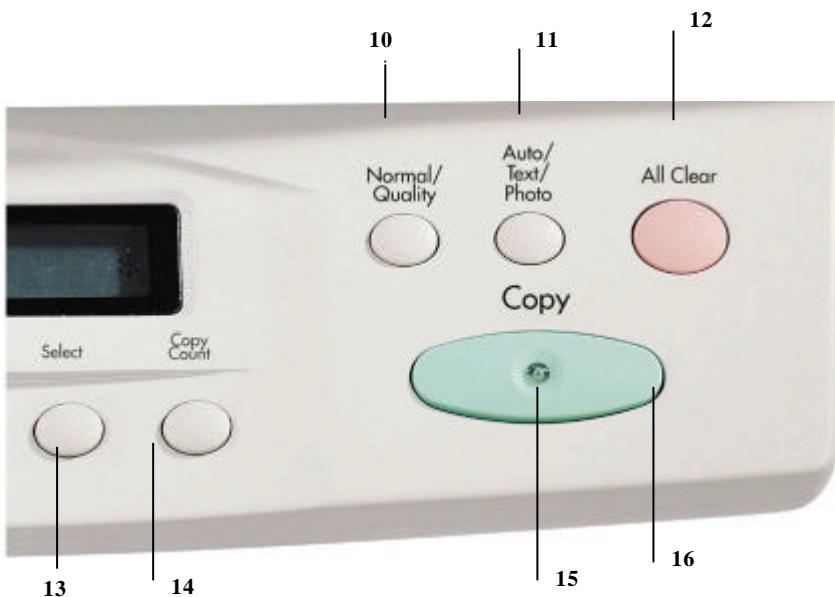
Figure 2.4 Document Placement

3. USING SC-110 AS A COPIER

3.1 THE CONTROL PANEL



1. **Paper Size:** Select your output paper size from A4, A3, B4, Letter, or Legal.
2. **Background Remove:** Set "Background Remove" on to print your document without the background color or off to print your document with the background color.
3. **Message Display window:** Display current settings.
4. **Duplex:** Press to start copying your single-sided originals to double-sided output.
5. **Reduce/Enlarge:** Reduce, enlarge or auto zoom your original document. Press to select the preset ratio: 100%, 115%, 122%, 141%, 200%, 86%, and 50%. Choose your desired ratio or adjust the ratio in 1% increment by the (▲) or (▼) button. Auto zoom: Automatically scale your original document to fit your output paper.
6. **Lighter/Darker:** Lighten or darken your image. Increase level of brightness or darkness by the (▲) button. Decrease level of brightness or darkness by the (▼) button.
7. **Menu:** Configure copying features including Printer Select, Input Tray, Output Bin, Offset Stacking, Staple, Hole Punch, Collate, and End Job Mode.
8. **▲ :** Go to the previous item displayed in the Message Display window or increase the value of the numeric entries.
9. **▼ :** Go to the next item displayed in the Message Display window or decrease the value of the numeric entries.



10. **Normal/Quality:** Select your Copy quality: **Normal** (300 dpi), or **Quality** (600 dpi).
11. **Auto/Text/Photo:** Press to respectively concentrate on photo, text, or auto copying.
12. **All Clear:** Clear your current settings and return to the default settings.
13. **Select:** Press to select your desired setting. (A star sign, "", will appear to indicate the selection is done.)
14. **Copy Count:** Choose the number of copies from 1 to 99. Increase the value of the numeric entries by the (▲) button or decrease the value by the (▼) button.
15. **Power/Copy LED:** The LED indicator turns green when power is on and turns flashing during copying.
16. **Copy:** Press to start copy.

Tips:

To use other settings than the one displayed in the Message Display window, simply repress the button of that setting to select other options. (For example, when you choose paper size with the Paper Size button, if the Message Display window shows A4 and you prefer Letter, you can just press the Paper Size button again until Letter is displayed.)

Note:

- (1).** An item message in the Message Display Windows ending with a “*” means the last setting.
- (2).** The default settings are: A4 Size, Normal Print Quality, 100% ratio, 1 copy.

IMPORTANT!

PRINTER MEMORY

To make good use of SC-110, it is recommended to install at least 4 MB of memory in your printer. If you want to print your document using Quality mode - 600 dpi as your Copy Quality mode, you need more RAM for your printer as using this feature requires more processing time and memory.

See the following chart for printer memory recommendations.

It is strongly recommended that you refer to the following table to ensure a successful color copy.

Copy Quality	Document Size	Minimum Memory	Recommended Memory
Normal	Letter Size	1MB	4MB
	Legal Size	2MB	8 MB
Quality	Letter Size	4MB	16MB
	Legal Size	6MB	20MB

If there is not enough memory in your printer, you may probably encounter either the printer does not print or the print quality is bad.

3.2 BEFORE MAKING COPIES

Customizing paper size:

The SC-110 provides five output paper sizes, A3, A4, B4, letter, and legal. The flatbed and the ADF will support up to legal size paper. Check or select the paper size to match your paper supply to ensure smooth operations.

To check or select paper size,

1. Press “Paper Size” button. The Message window will display your current default setting, such as “A4*”. If your current paper supply is the same as your default setting, you can skip the following steps. Otherwise, continue with the following steps.
2. Keep on pressing the **▲** or **▼** button until the desired paper size appears. When the desired paper size message is shown in Message Display window, press the Select button and a “*” sign will appear on the right-hand side of the displayed paper size. For example:

Suppose you want Legal size to be the current setting. Press the “Paper Size” button, and then **▲** or **▼** button until the size “Legal” appears in Message Display window. Press the Select button and a “*” sign will appear on the right-hand side of the word “Legal”.

➤ Note:

Each time when you press All Clear button or power off the SC-110, the SC-110 automatically returns to the factory default setting. As a result, you have to change any setting that you have customized to your environment after pressing the All Clear button.

Customizing copying features:

SC-110 supports a variety of copying features to meet many copying purposes.

Specifying a printer model is required before customizing copying features.

To specify a printer model,

1. Press Menu button to display the first copying feature, Printer Select.
2. Press Select and then **▲ or ▼** button to respectively display printer models included.
3. Press Select button once again to specify one of printer models, connected to SC-110. An asterisk will appear next to the printer model name.

Note: If the printer model connected to SC-110 is not any of QMS Print or PageWork systems currently supported, specify PCL Emulation. This is a generic printer model that will work with most laser printers that support the PCL Emulation. However, you may lose the ability to select other options.

The following steps depict the procedures of how to configure all other copying-feature combinations after a printer model is specified.

1. Press Menu and then the **▲ or ▼** button to display the desired copy feature. Press Select.
2. Press the **▲ or ▼** button until the desired option is displayed. Press Select.
3. Repeat step 1 to 2 to set up the other desired copy-feature preference options.

The following table includes available copying-feature preference options of all printer models supported. As for the detailed direction of copying features, please refer to respective printer user manuals.

Printer Feature	QMS 2060	QMS 4060	QMS 2560	QMS 3260 /4032	PageWork /Pro 18	PCL Emulation
Input Tray	Multipurpose Upper Optional	Upper Middle Lower Optional	Multipurpose Main Optional 1 Optional 2 Optional 3 LCC	Multipurpose Upper Lower Envelope Optional 5 Optional 6 Optional 7	Multipurpose Tray 2 Tray 3	N/A
Output Bin		Upper Face-up Stack Face-down Stack	Top Bin Finisher Bin Bin 1 Bin 2 Bin 3 Bin 4 Bin 5 Bin 6 Bin 7 Bin 8 Bin 9 Bin 10	Upper Face-Up Top Stack Center Stack Bottom Stack	N/A	N/A
Duplex (Button on control panel)	Off On Tumble	Off On Tumble	Off Long Short	Off On Tumble	Off Long Short	Not Available
Offset Stacking	N/A	Off On	Off On	Off On	N/A	N/A
Staple	N/A	N/A	Off On	Off Front Corner Back Corner Center	N/A	N/A
Hole Punch	N/A	N/A	Off On	N/A	N/A	N/A
Collate	Off On	Off On	Off On	Off On	Off On	N/A
End Job Mode	None QMS EOD HP EOD	None QMS EOD HP EOD	N/A	None QMS EOD HP EOD	N/A	N/A

Note: The default preference options are bolded.

Quick Note of copy-feature terms:

1. Duplex button: Double-sided copying is available when the original is fed only through ADF of SC-110.

Off	single-sided copying
Long/On	double-sided copying: The reverse-page content starts being copied from the left edge.
Short/Tumble	double-sided copying: The reverse-page content starts being copied from the top edge.

2. Offset Stacking: If the output bin selected supports offset stacking, then the output jobs will be offset from each other when enabled.

Off	Copying jobs stack normally.
On	Each copying job is offset in an output bin.

3. Staple: If the output bin selected supports stapling of jobs, the enabled job will be stapled when the original is fed only through ADF of SC-110.

None	Pages are not stapled.
Front Corner	Pages are stapled at the front corner.
Back Corner	Pages are stapled at the back corner.
Center	Pages are stapled at two points in the center.

4. Hole Punch: If the output bin selected supports hole punch, the job will be hole-punched if enabled.

Off	Pages are not punched.
On	Pages are punched.

5. Collate: Multiple pages can be copied either as complete sets in numeric order or as separate sheets.

Off	Pages are not collated.
On	Pages are collated.

6. End Job Mode: This printer mode enables the printer to identify the end of each job to ensure correct printing respectively.

None	No End Job Mode
QMS EOD	QMS -formatted End Job Mode
HP EOD	HP -formatted End Job Mode

Note: The type of End Job Mode set on SC-110 must match that on QMS Print System.

7. Input Tray: This printer mode selects the input tray to pull paper from. Refer to the chart on page 11 for your particular printer type and options.
8. Output Tray: This printer mode selects the output tray to push paper to after printing. Refer to the chart on page 11 for your particular printer type and options.

3.3 MAKING SIMPLE COPIES VIA THE FLATBED

The Operating Steps:

1. Place your original face down on the document glass.
2. Press the Copy button. The Message window displays “Copy...” and the Ready LED will flash.
3. Within a few seconds, the copying is done. The Message window then displays “1 Copy @100%” and the Ready LED is now steadily on until next task.

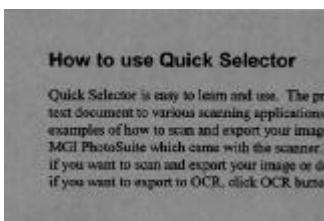
3.4 MAKING COPIES WITH COPY FEATURES

3.4.1 REMOVING ORIGINAL BACKGROUND

If your original comes with color background, you can remove the background to sharpen your text.

The Operating Steps

1. Place your document face down on the document glass.
2. Press the “Background remove” button. The Message window displays “Background remove on”.
3. Press the Copy button. The printout shows the background is removed and the text becomes clearer and sharper.



Before “Background remove on”



After “Background remove on”

3.4.2 ENLARGING OR REDUCING YOUR ORIGINAL

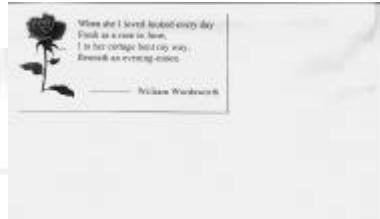
Like a normal copier, the SC-110 also features auto enlargement/reduction function to resize your original.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Press the “Reduce/Enlarge” button, the Message Window displays “Ratio:100%”.
3. Repress the button to see more options. For example, if you need 150% enlargement, select “141%” then press the “▲” button to increase the percentage to 150 in 1% increment.
4. Press the Copy button. And then the printout shows enlargement of 150% of your original.



Ratio:100%



Ratio: 150%

➤ Note:

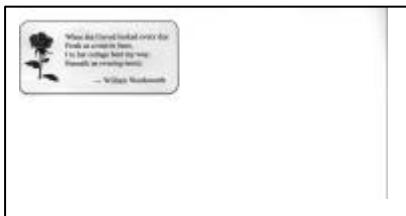
- Another option to reduce your original is to firstly repeat the enlargement or reduction steps 1 to 3 and then press the “▼” button to decrease the percentage in 1% increment.
- The maximum magnification rate is 400% while the minimum reduction rate is 25%.
- The largest magnified size is “Legal” when paper size is set to A3 or B4 with a 100% or greater ratio.

3.4.3 AUTO ZOOMING YOUR ORIGINAL

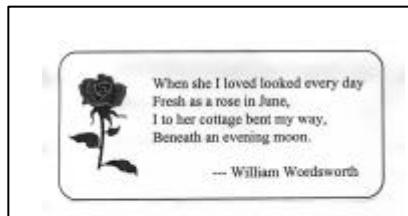
Auto Zoom is a convenient function to resize your original without giving additional thought to whether the magnification or reduction will be larger than the existing paper size set on the SC-110.

The Operating Steps:

1. Repeat the above Enlargement Step 1 & 2.
2. Repress the “Enlarge/Reduce” button until the Message Window displays “Auto”.
3. Press the Copy button. The printout shows your original automatically scales to your paper size.



Before Auto Zoom (Ratio:100%)



After Auto Zoom

3.4.4 CHANGING YOUR COPY DENSITY

Copy density refers to the degree of darkness which the SC-110 has reproduced. There are times when your original is unsatisfactorily darker or lighter. It is of great advantage to use the density feature to compensate the unsatisfactory original.

The Operating Steps:

1. Place your original face down on the document glass.
2. Press the “Lighter/Darker” button. The Message Window displays the default degree of darkness.
3. Repress the “Lighter/Darker” button to select one of the other levels. Or you may press the “▲” to increase the level, press the “▼” button to decrease the level.
4. Press the Copy button. Your printout shows the darkness or brightness has been compensated.

3.4.5 CHOOSING YOUR COPY QUANTITY

The Operating Steps:

1. Place your original face-down on the document glass .
2. The default copy count is 1. If you need to make 3 copies, for example, press the “Copy Count” button and the Message Window displays “2 copy @100%”.
3. Repress the “Copy Count” button and the Message Window displays “3 copy”.
4. Press the Copy button. After a few seconds, you have 3 copies from your printer.

» Note:

- Another option to change your copy quantity is to press the “▲” button to increase the number or the “▼” button to decrease the number.
- The maximum copy quantity is 99.

3.4.6 ENHANCING YOUR COPY QUALITY

The SC-110 provides “Quality mode” option to improve your copy quality particularly when your original comes with a photo in it. Quality mode allows your printout to impressively reveals more image(photo) details.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Press the “Normal/Quality” button. The Message Window displays “Normal mode”.
3. Repress the “Normal/Quality” button and the Message Window displays “Quality mode”.
4. Press the Copy button. The copying begins processing with the Quality mode.

See following photo/text reproduction between normal copier v.s. SC-110 in quality mode.



Make copies with a
normal copier



Make copies with
a SC-110 in quality mode

> Note:

- To produce copies using quality mode, make sure your printer has at least 4M memory as this requires more processing time.

3.4.7 MAKING COPIES OF A 3D OBJECT

The SC-110 solution improves your copy reproduction significantly and even makes a 3D object copies amazingly clear.

The Operating Steps:

1. Place your 3D object on the document glass.
2. Press the “Normal/Quality” button and the Message Window displays “Normal mode”.
3. Repress the “Normal/Quality” and the Message Window displays “Quality mode”.
4. Press the Copy button. Your 3D object copy is done.



The 3D copy
using a normal copier

The amazing 3D copy
using the SC-110

3.4.8 AUTOMATIC POWER SAVING

The SC-110 features automatic power saving without unplugging the power cable. If you have not used the SC-110 over an hour, it automatically turns into power saving status. At this moment, the Message Window displays “Power Saving...” while the Ready LED is flashing.

To resume the ready status, press any one of the button on the Control Panel. The Message Window displays “Warming up...” and then “1 Copy @100%”, the ready status. The Ready LED now turns steadily on.

3.4.9 FOCUS ON PHOTO COPY, TEXT COPY, OR MIXED PHOTO & TEXT COPY

If the content in the original is occupied by photo images only or by photo images with a little text on it, press to select the Photo function to get a photo-concentrated image copy. On the contrary, the Text function helps you get a text-concentrated copy.

However, if the proportion of the photo image is almost the same as that of text in the original to be copied, it is recommended to utilize the Auto function from Auto/Text/Photo button in order to get the most optimal printout with photo and text mixed.

The Operating Steps:

1. Place your document face-down on the document glass.
2. Keep on pressing “Auto/Text/Photo” button to select one of these 3 document-type functions, called Photo, Text, and Auto.
3. Press the Copy button, and the printout shows the best reproduction with the document-type concentration selected.

4. USING SC-110 AS A SCANNER

To run SC-110 at optimum speed, the following minimum requirements are recommended:

- IBM compatible PC 386/486, Pentium or later;
- Microsoft Windows 95/98, Windows NT;
- One printer port available: EPP(enhanced parallel port);
- 20 Megabytes of available hard disk space for installation;
- 16 Megabytes of RAM (32 Megabytes or higher recommended);
- A video graphics array (VGA) monitor;
- A Microsoft Windows-compatible pointing device (e.g., mouse);
- A CD ROM drive.

4.1 INSTALLATION PROCEDURE

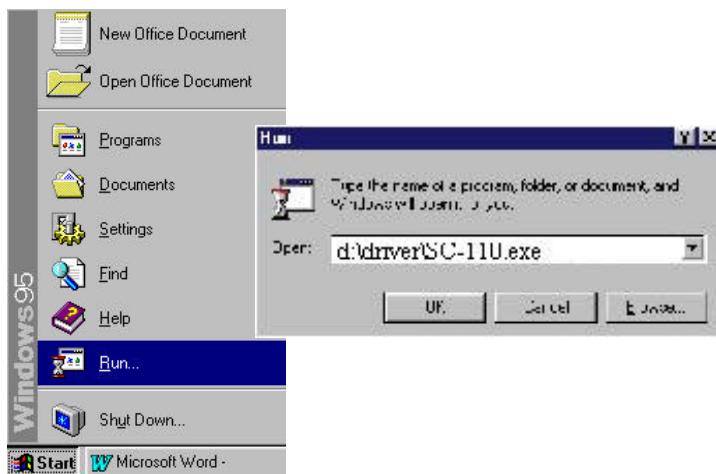
Installation procedures of SC-110 driver are as follows:

1. Start Windows 98, Windows 95, or NT
2. Insert the SC-110 Utilities CDROM into your CDROM drive.

> **Note:**

- On some computer systems, the CD-ROM will automatically launch. If this happens, choose to install the software utilities and driver from the main menu.

3. Press the Start button, choose RUN, type d:\driver\SC-110.exe (where d: is the CD-ROM drive in use), and then click OK.
4. Follow the on-screen instructions to complete the installation.



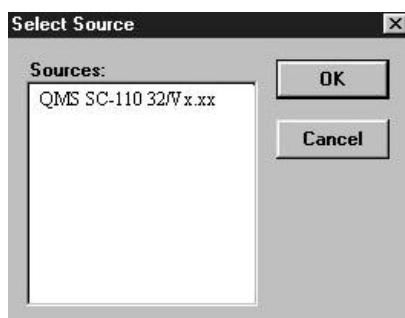
4.2 UNINSTALLING THE SC-110 DRIVER

You can uninstall the SC-110 driver by selecting Start>Programs>SC-110 and clicking the *Uninstall* driver icon from SC-110 group.

5. SCANNER OPERATION & DOCUMENT PRINTING

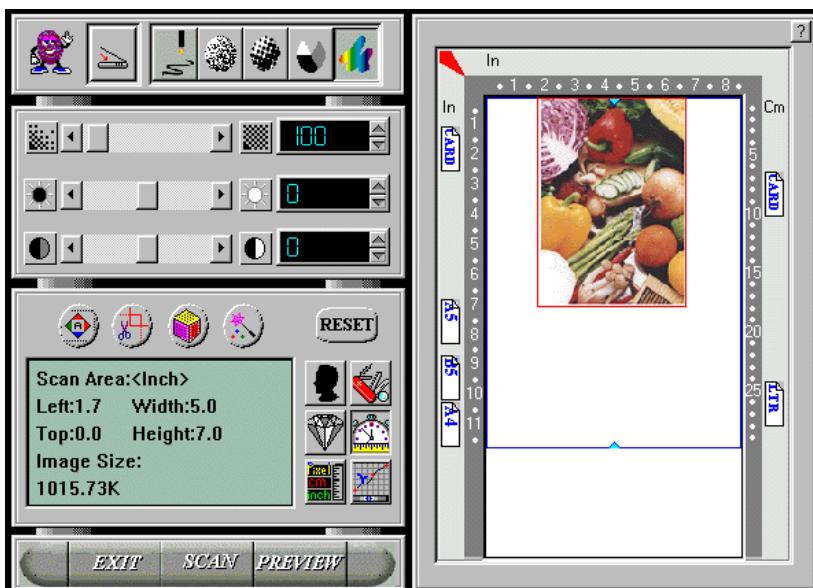
Scanning Images from within an Application (TWAIN)

1. Open your image-editing application and choose **Select Source** from the File menu. If the **Select Source** menu options are not available from the File menu, see the user guide of your application to learn how the TWAIN link is used.
2. A dialog box appears containing the different TWAIN sources that you can choose to bring an image into your application.
3. Select **SC-110 /32 Vx.xx** as the source.



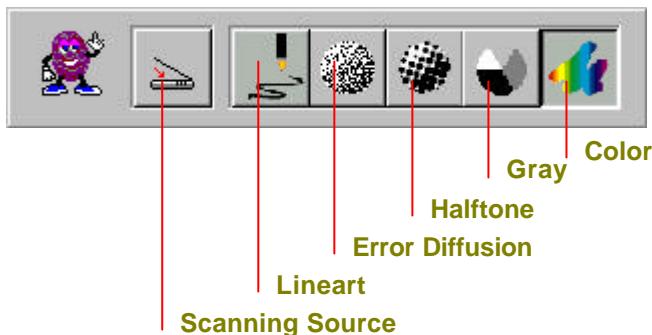
4. When you have used the dialog box to select a different source, you will need to select **SC-110** as the source again before you can reuse the SC-110.
5. Place the image to be scanned face down on the glass.
6. From the File menu, select **Acquire**.
7. The TWAIN user interface will pop up on the screen. Click on the **Preview** or **Scan** button to get the image.

The TWAIN user interface:



5.1 IMAGE TYPE

The SC-110 provides five image types as explained below:



Scanning Source

Two scanning sources are provided- flatbed as well as automatic document feeder(ADF).

Line art

Line art presents the image in black and white only and there are no intermediate shades of gray in between.

Halftone

In addition to the black and white display, Halftone can present a somehow gray shade of image by using different size of dots.

Error Diffusion

While taking up but a minimum storage space, error diffusion gives good image texture and excellent image details.

Gray (Internal 4096 levels of gray scale)

12-bit Gray presents a 4096 shades of gray in an image.

Color (Internal 68.7 billion colors)

The 36-bit True Color internally presents 68.7 billion-color levels with much more tonal range and color-image details.

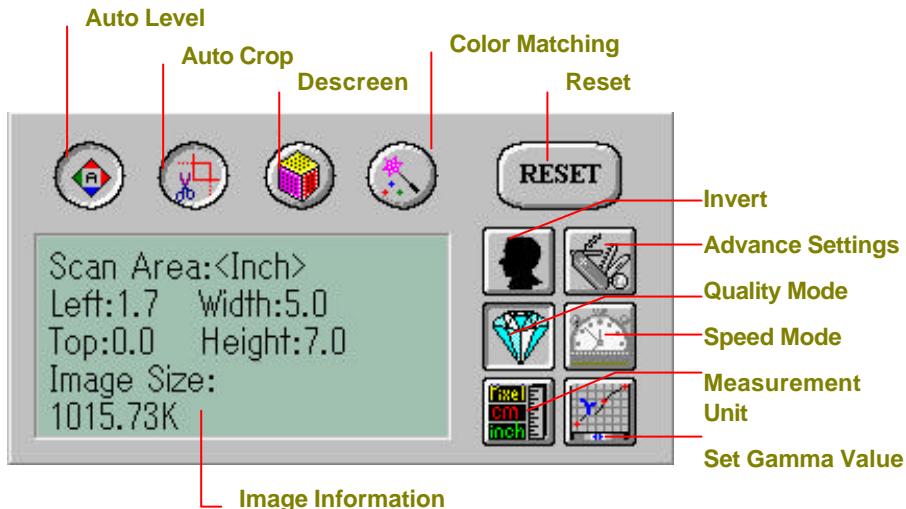
5.2 SCANNING PARAMETERS & IMAGE CONTROL



Resolution: The number of dpi (dots per inch) that the SC-110 uses for a scan. Usually the greater the number, the higher the resolution. Yet up to a certain level, the resolution will not be visually increased but the disk space will be increased.

Brightness: Adjusts the lightness or darkness of an image. The higher the value, the brighter the image.

Contrast: Adjusts the range between the darkest and the lightest shades in the image. The higher the contrast, the bigger the different gray scales.



Auto Level: Optimizes the scanned image.

Auto Area: Automatically sets the whole document as the scan area, no matter what its size.

Descreen: Eliminates the Moire patterns commonly found in printed matter.



Before descreen



After descreen

Color Matching:

Adjusts the color quality of the image to make it close to the original. This function uses default parameters to adjust the image.

Reset:

Resets the scanning parameters you set.

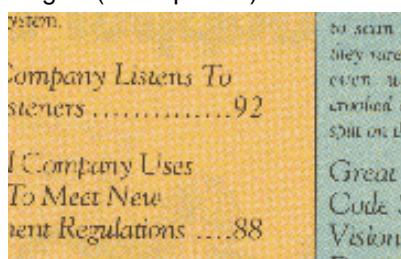
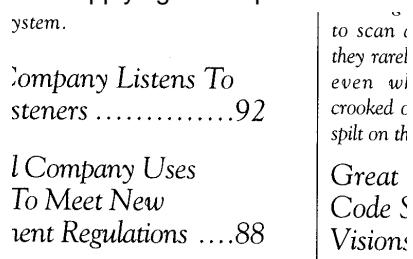
Invert:

The invert command reverses the brightness and the color in the image. For color images, each pixel will be changed into its complementary color at the command of *Invert*.

Advance Settings:

The Advance Settings provide several functions such as Dynamic Background Removal and Color Drop-out. These functions are briefly explained as below:

1). DBR (Dynamic Background Removal) - Apply exclusively when you need to scan as an Lineart image . The DBR function incorporates a few enhanced options to allow you to remove background color to sharpen your text or drawing.

Original(Color picture)**After applying DBR option**

2). Color drop-out - Apply exclusively when you need to scan as a black and white image.

The Color drop-out function allows you to remove one of the R(Red), G(Green), or B(Blue) color or to convert all the color data into Neutral Gray. For example, if you want to remove the text or background in blue color, simply check the Blue Channel then the text or background in blue color will be removed. On the other hand, if your original contains various color data, then check the Neutral Gray to retain all the color data in gray since removing either one of the red, green, or blue color will inadvertently affect the rest color data as every color contains different elements of each of the red, green, and blue channel. See the result below:

Your original with blue color background After click the B(Blue) channel

“The trees are in their autumn beauty,
The woodland paths are dry,
Under the October twilight the water
Mirrors a still sky;
Upon the brimming water among the stones
Are nine-and-fifty Swans.”

—W.B. Yeats

“The trees are in their autumn beauty,
The woodland paths are dry,
Under the October twilight the water
Mirrors a still sky;
Upon the brimming water among the stones
Are nine-and-fifty Swans.”

—W.B. Yeats

Your original with red watermark

Marketing

ABC Inc. distributes and sells its product worldwide through OEMs/ODMs, and distributors. As of June 1999, ABC has employed over 21 well-trained marketing, sales, and support personnel. To better serve its customers, ABC has assigned an account manager for each of its OEM/ODM customers. These account managers are responsible for effectively coordinate the outstanding issues in sales, manufacturing, or development and assure the status of each customer's product is properly monitored. Our goal is to achieve and maintain complete customer satisfaction.

After click the R(Red) channel

Marketing

ABC Inc. distributes and sells its product worldwide through OEMs/ODMs, and distributors. As of June 1999, ABC has employed over 21 well-trained marketing, sales, and support personnel.

To better serve its customers, ABC has assigned an account manager for each of its OEM/ODM customers. These account managers are responsible for effectively coordinate the outstanding issues in sales, manufacturing, or development and assuring the status of each customer's product is properly monitored. Our goal is to achieve and maintain complete customer satisfaction.

Quality/Speed Mode:

Users can select the mode to perform scanning according to their own need. Select quality mode scanning if your emphasis is on the quality of the scanned image. Or you can select speed mode scanning if you want to speed up the scanning process.

Pixel/Inch/Cm:

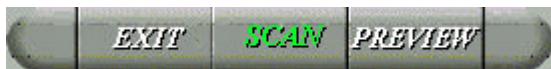
Represents the different measuring systems to be used in each scan.

Set Gamma: Adjusts the midtone of the image yet without losing details of the lightest and the darkest areas at the same time.

Image Information:

Gives related information of the scanned image.

5.3 SCANNING



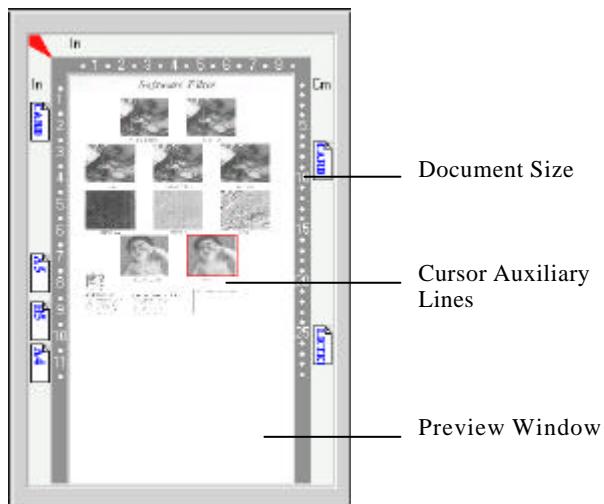
Preview: Previews your image roughly and allocates the area to be scanned.

Scan: Executes the scan action.

Exit: Cancels the current job.

Document Size: To designate the size of your document, just click on its icon on the margin of the preview window.

As shown in the figure below, in the Preview window, you can define the area to be scanned by dragging the four cursor auxiliary lines.



5.4 PRINTING

Connect the printer cable as shown below.

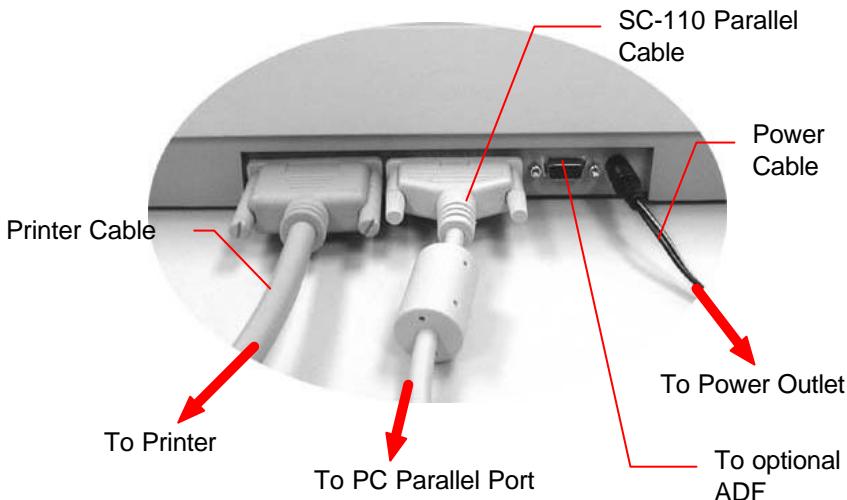


Figure 5.1 SC-110 Cable Connection

Caution:

1. **Be sure to power on the SC-110 if you want to do pass-through printing.**
2. **Do not scan and print at the same time.**
3. If your PC does not support EPP mode or has pass-through compatibility problem, please contact your authorized local dealer for an EPP card or an additional interface card.

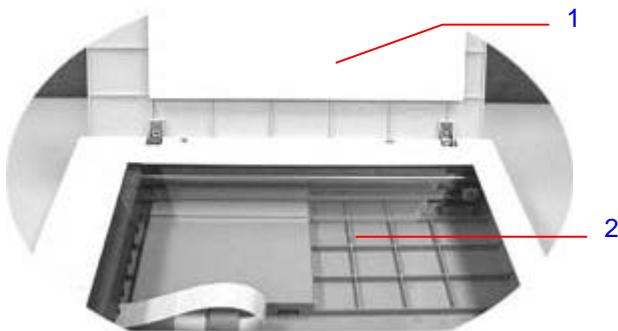
6. MAINTENANCE

Cleaning:

The SC-110 is designed to be maintenance-free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

Procedure

1. Open the document cover as shown in Figure 6-1.
2. Dip a soft clean cloth with isopropyl alcohol (95%).
3. Gently wipe the document glass and the white sheet beneath the document cover to remove the dust or any toner particles.
4. Close the document cover. The SC-110 is now ready for use.



1. Document Cover
2. Document Glass

Figure 6-1 Cleaning

7. TROUBLESHOOTING

If you have any operational problem, please refer to the following troubleshooting hints.

7.1 QUESTIONS AND ANSWERS

Question: Why does the scanned image always come out to be too dark?

Answer: 1) Modify the Gamma setting to 1.8 for your monitor and, when printing, set Gamma to 2.2 for your printer.
2) Use the Brightness setting of the TWAIN user interface to get a brighter image.

Question: The scanning speed of my SC-110 is much slower than that of those installed at other computers. Can I speed it up?

Answer: Set your PC printer port to the EPP mode from BIOS setting.

Question: Why does my SC-110 scan at a very low speed?

Answer: If you have installed *Works for Windows*, it will install Window Printing System (WPS) in your WIN.INI file. This will take up the printer port time remarkably. You can remove the WPS from your WIN.INI file, as follows:

From:

[MS Text Converters]

MSWorksWin=Works for Windows

2.0,C:\WINDOWS\MSAPPS\TEXTCONV\worksdos.cnv, wps

Works for Dos 2.0=Works for DOS 2.0

MSAPPS\TEXTCONV\workswin.con, wps

To:

[MS Text Converters]

MSWorksWin=Works for Windows

2.0,C:\WINDOWS\MSAPPS\TEXTCONV\worksdos.cnv

Works for DOS 2.0=Works for DOS 2.0,

C:\WINDOWS\MSAPPS\TEXTCONV\workswin.con

Question: The printer does not print the documents. Why?

Answer: Pass-through printing may pose a problem for some printers. It is suggested to add a second printer card for printing purpose, or you may call your authorized local dealer for further support.

Question: Does it take long for the SC-110 to initialize itself ?

Answer: If your printer port supports SPP mode only, it takes about two minutes for the SC-110 to initialize itself. If your printer port supports EPP mode, the initialization speed is much faster, about 20 seconds.

Question: Why sometimes pass-through printing does not work at all?

Answer: It may be that you fail to power on the SC-110. When doing pass-through printing, please be sure to power on the SC-110. Else, without power, the SC-110 can not transfer the printing data/signals to the printer.

Question: Why do some parallel port devices not work with the SC-110?

Answer: The SC-110 does pass-through printing , but the pass-through printing may not work if you connect the parallel port with devices other than printer. Therefore, if you would like to connect some parallel port devices other than printer, please do not connect them to the same parallel port that the SC-110 currently uses. It is suggested to use other parallel ports to connect these devices or keypro. For instance, you can connect the SC-110 to LPT1, and connect other parallel port devices to LPT2. Or you can add a data switch to avoid the problem.

7.2 TECHNICAL SERVICE

Technical support for the SC-110 is provided at authorized resellers and the QMS Customer Response Center. Before you contact us, please prepare the following information for a quick solution:

- Scanner serial & revision number (located on the bottom of the scanner);
- Hardware configuration (e.g., your host CPU type, RAM size, free disk space, display card, interface card);
- The name and version of your scanning software application;
- The version of your scanner driver.
- The brand and model name of your printer.

Corporate

QMS, Inc.

1 Magnum Pass
Mobile, AL 36618
Phone: 334-633-4300
Fax: 334-633-4866

Product Information

Phone: 800-523-2696
Email: info@qms.com

QMS Technical Support

Phone: 877-778-2687
Fax: 334-633-3716
support@qms.com

QMS Service Dispatch:

Contacts:

800-858-1597
800-762-8894

QMS EMEA

QMS Australia	(+61) 2-9884-9966
QMS Canada	800-268-0343
QMS France	(+33) 01-410 79 393
QMS Germany and Austria	(+49) 89 63 02 67 0
QMS Italy	(+39) 052-1231 998
QMS Sweden, Finland, Norway, and Denmark	(+46) 8-600 01 30
QMS Republic of South Africa	(+27)011-805 7335
QMS United Kingdom and Ireland	(+44) 1784-442255
QMS Netherlands and all unlisted countries	(+31) 346-551333
Internet http://www.qms.nl	

QMS Japan

General Contact	(+81)03-3779-9605
Fax	(+81)03-3779-9655
Internet	http://www.qmsj.co.jp

8. SPECIFICATIONS

Copier specifications without ADF:

Copy Resolution	Normal: 300x300dpi Quality: 600x600dpi
Copy Area	Max. 8.5"x 14.0" (Legal size)
Copy Features	Zooming from 25%~400% Auto Zooming Auto Background Removal Auto Photo, Text Separation
Printer Model Supported	PCL, QMS 2060/4060/2560 QMS 3260/4032, PageWork/Pro 18
Printer Interface	IEEE 1284 (bi-directional) ECP/SPP
Power Source	100 - 240V, 50 - 60 Hz
Power Consumption	< 20 W
Physical Dimension	476 x 356 x 91mm (18.7" x 14" x 3.6")
Weight:	4 kg (8.8 lbs)

Scanner specifications:

Scanner Type	Flatbed Scanner
Resolution	300 x 600 dpi
Enhanced Resolution	9600x9600 dpi
Scan Speed	6 PPM /10 PPM(with ADF) at 300dpi, Lineart
Scan Method	Color Charged-Coupled Device
Light Source (CCFL)	Cold Cathode Fluorescent Lamp
Scan Area	Max. 8.5"x 14.0" (Legal size)
Image Types	36-bit color(internal) 12-bit gray(internal) 1-bit Lineart, Dither Error Diffusion
PC Interface	IEEE 1284 (bi-directional) ECP/EPP/SPP

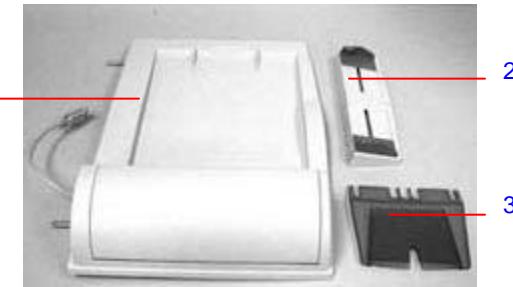
9. SC-110 AUTOMATIC DOCUMENT FEEDER (ADF) USER'S GUIDE

The SC-110 Automatic Document Feeder (ADF) is a very convenient addition to your SC-110. With the ADF, you can automatically copy or scan up to 25 pages at a time.

9.1 INSTALLING THE ADF

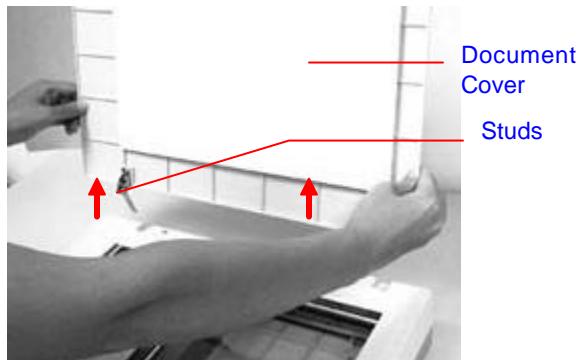
9.1.1 UNPACKING THE ADF

1. ADF Document Cover
2. ADF Paper Tray
3. ADF Paper Support



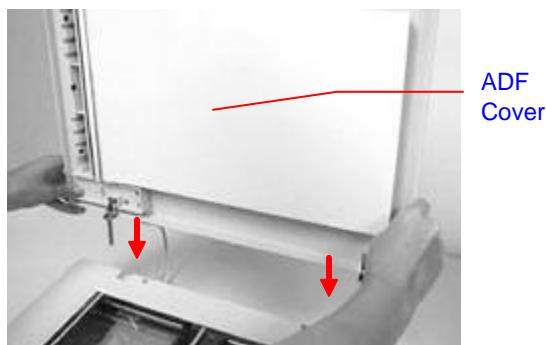
9.1.2 INSTALLING THE ADF

1. Turn off your SC-110.
2. Disconnect the power cable, and lock the scanning unit.
3. Remove the document cover by opening the cover and lifting the studs from the hinge holes at the rear of the SC-110.

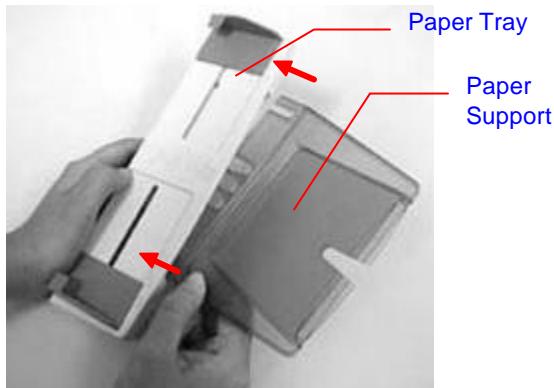


Note: Please store the document cover on a flat surface in a safe place.

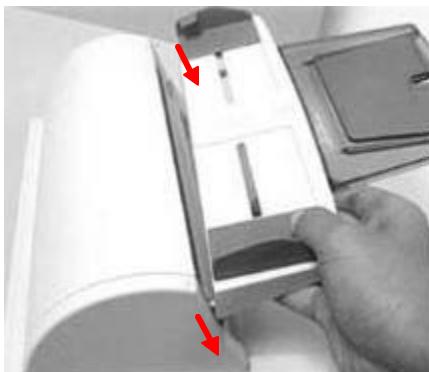
4. Hold the ADF document cover and insert its studs to the hinge holes at the rear of the SC-110.



5. Insert the notched corners of the ADF Paper Support to the clip-joints on the ADF Paper Tray.

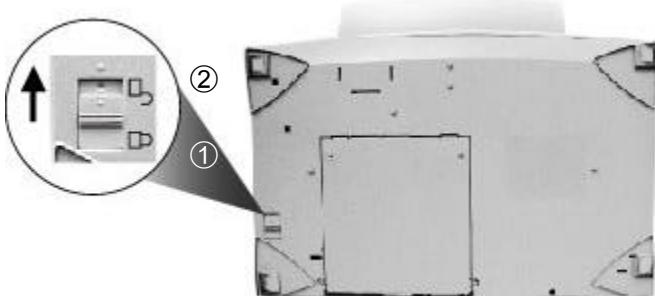


6. Insert the notched corners of the ADF Paper Tray into the clip-joints on the ADF document cover.



9.1.3 UNLOCKING THE SC-110

Slide the Lock Switch on the bottom of the SC-110 to unlock the scanning unit.

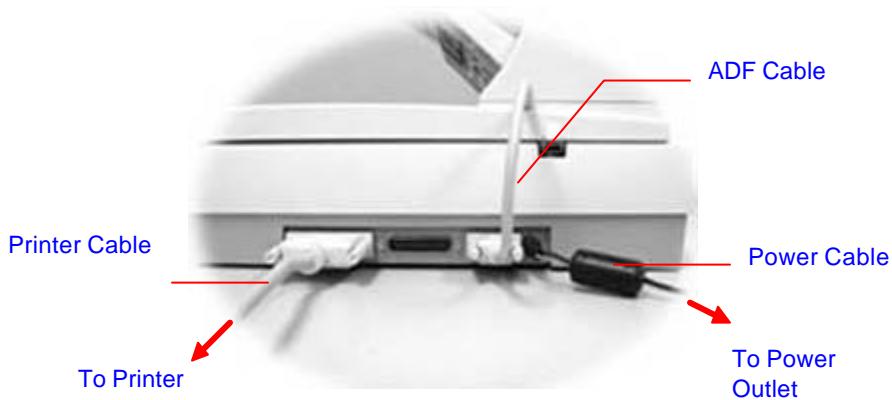


1. “Shipping” Position
2. “Use” Position

9.1.4 CONNECTING THE CABLES

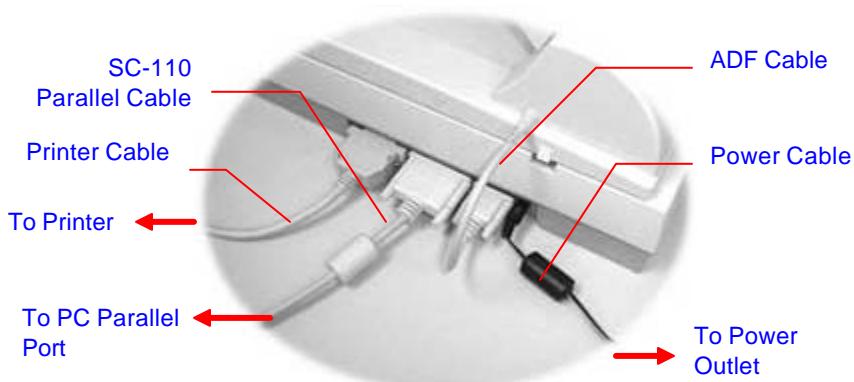
9.1.4.1 CONNECTING SC-110 TO WORK AS A COPIER

Connect the ADF cable, the power cable, and the printer cable respectively.



9.1.4.2 CONNECTING SC-110 TO WORK AS A SCANNER/COPIER

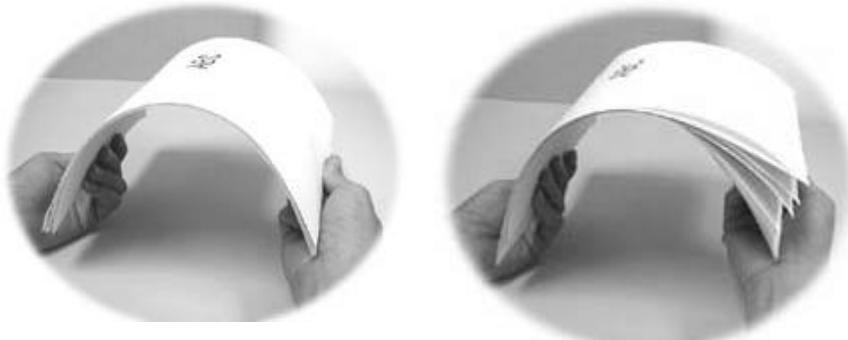
Connect the ADF cable, the power cable, the SC-110 parallel cable, and the printer cable respectively.



9.2 USING THE ADF

9.2.1 BEFORE YOU BEGIN

Standard paper should feed easily. To prevent occasional paper jams when automatically feeding multi-page documents, fan the paper before loading.



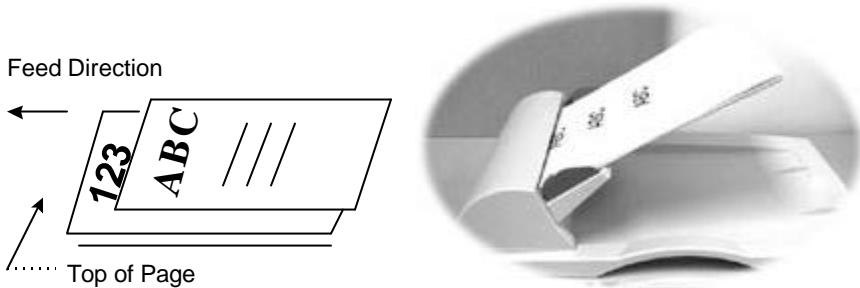
Paper which can not be properly fed by the ADF:

- Paper with clip or staple attached;
- Paper with ink not totally dry;
- Paper with inconsistent thickness, such as envelopes;
- Paper with wrinkles, curls, folds or tears;
- Coated paper;
- Carbonless paper;
- Paper narrower than 4.5" or wider than 8.5"; Shorter than 5" or longer than 14"
- Paper thinner than 0.07mm; thicker than 0.15mm
- Items other than papers, such as cloth, metal or OHP film;
- Notched paper;
- Paper with an odd (non-rectangular) shape;

Please use the flatbed to copy or scan documents that cannot be fed by the ADF.

9.2.2 LOADING THE PAPER

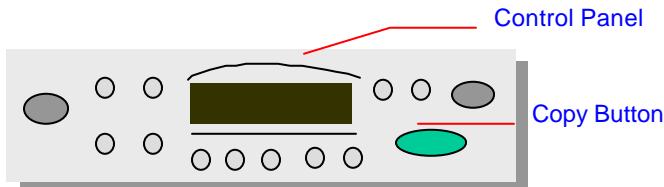
Place your document with the text face up and make the top of the page to the left side as shown below.



9.2.3 STARTING YOUR FIRST COPY

9.2.3.1 COPYING MULTI-PAGE DOCUMENT

After the installation of the ADF unit is completed and you have properly placed a stack of your document on the ADF Paper Tray, just a touch of the Copy button on the Control Panel of SC-110, then your task is done in a minute.

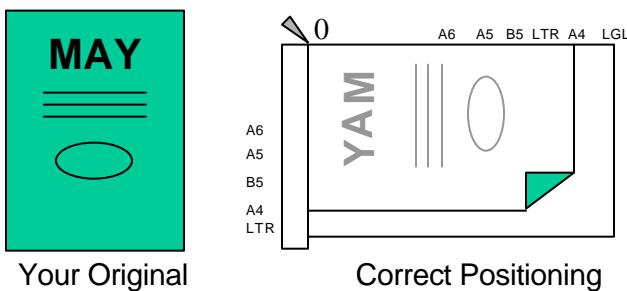


To apply copy features displayed on the Control Panel, please refer to the previous section, *Making Copies with Copy Features*.

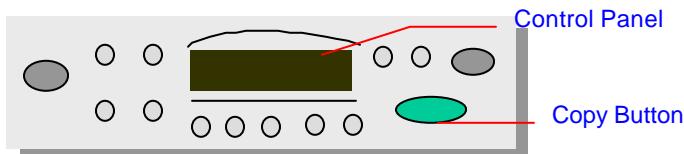
9.2.3.2 COPYING A SINGLE PAGE

To copy a single page, you can place your document either on the ADF Paper Tray or on the document glass (recommended). To copy a single page through flatbed, please do the following:

1. Remove any pages from the ADF Paper Tray.
2. Raise the ADF document cover.
3. Place your document face-down on the document glass. Observe that the top edge of your original near the document alignment as marked by a triangle.



4. Close the ADF document cover.
5. Press the Copy button on the Control Panel of SC-110.

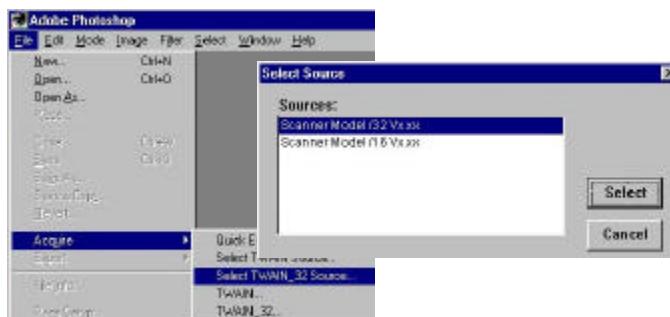


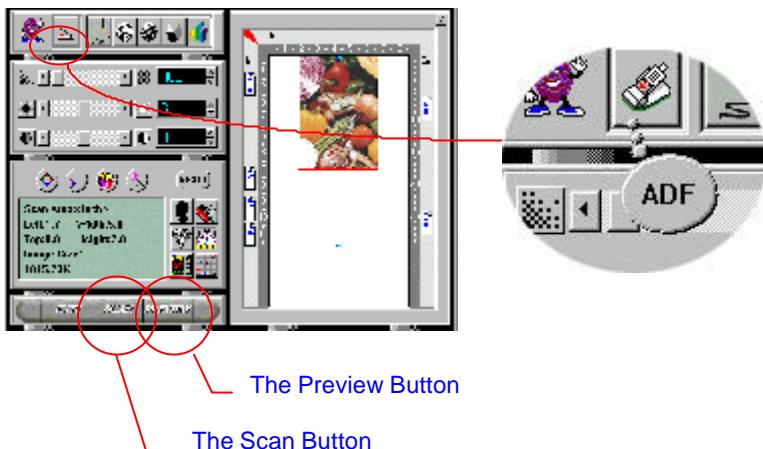
To apply copy features displayed on the Control Panel, please refer to section 3.4, *Making Copies with Copy Features*.

9.2.4 STARTING YOUR FIRST SCAN

9.2.4.1 SCANNING MULTI-PAGE DOCUMENT

1. Place your document with the text face up on the ADF Paper Tray.
2. Start your image editing application by clicking the Start button on the task bar and select the name of the application.
3. Choose Acquire from the File menu and click Select TWAIN Source, for example, please select SC-110 V.X.xx. (The command to open the TWAIN source may vary due to different application. Please refer to the user manual of your TWAIN application.)
4. In a minute, the TWAIN window will be displayed.



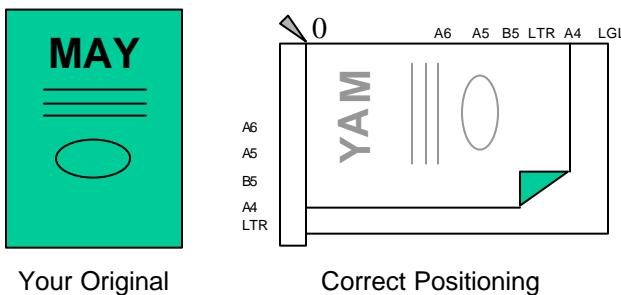


5. Press the Source button to switch the scanning source to ADF at the top of the TWAIN window.
6. Press the Preview button to get an initial scanned image at a low resolution to allocate your selected scan area.
7. Open the ADF document cover to take out the document and then position it on the first page of the document on the ADF Paper Tray.
8. Finally press the Scan button on the bottom of TWAIN window or the Scan button on the Control Panel.

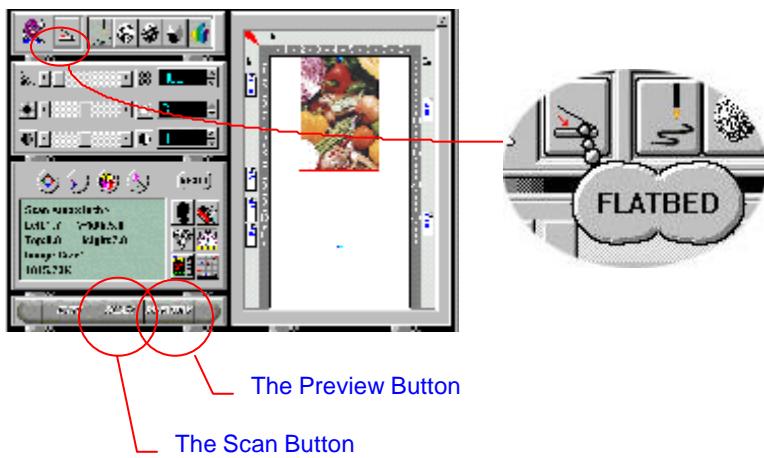
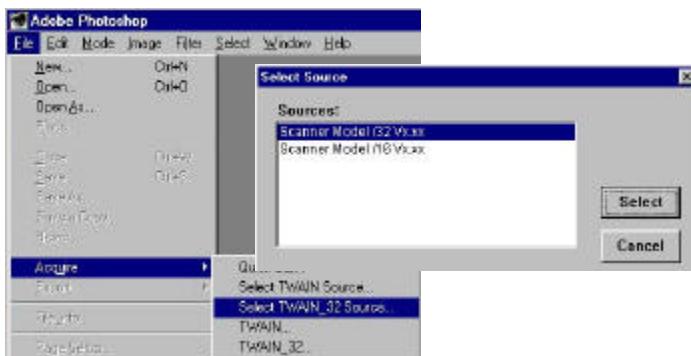
9.2.4.2 SCANNING A SINGLE PAGE

To scan a single page, you can place your document either on the ADF Paper Tray or on the document glass(recommended). To scan a single page through flatbed, please do the following:

1. Raise the ADF document cover.
2. Place the page on the document glass. Observe that the top edge of your original near the document alignment as marked by a triangle.



3. Close the ADF document cover.
4. Start your image editing application by clicking the Start button on the task bar and select the name of the application.
5. Choose Acquire from the File menu and click Select TWAIN Source, for example, please select SC-110 V.X.xx. (The command to open the TWAIN source may vary due to different applications. Please refer to the user manual of your TWAIN application.)
6. In a minute, the TWAIN window will be displayed.
7. Select Flatbed source at the top of the TWAIN window.
8. Press the Preview button to get an initial scanned image at a low resolution image to allocate your selected scan area. Finally press the Scan button on the bottom of TWAIN window or the Scan button on the Control Panel.



9.3 MAINTAINING THE ADF

9.3.1 CLEANING THE ADF

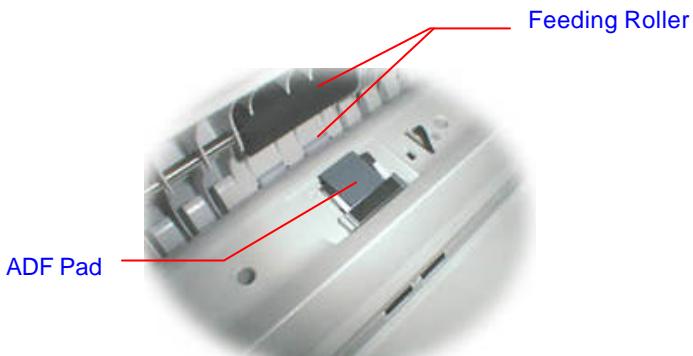
The SC-110 is designed to be maintenance free. However, it still needs to be cleaned occasionally to ensure optimum image quality and performance.

From time to time the pad assembly and feeding rollers may become contaminated with ink, toner particles or paper dust. In this case the SC-110 may not feed documents smoothly. If this occurs please follow the cleaning procedures to return your Scanner to its original state.

The cleaning procedures:

1. Moisten a cotton swab with isopropyl alcohol (95%).
2. Gently open the ADF front cover. Wipe the feeding rollers by moving the swab from side to side. Rotate the rollers forward with your finger and repeat the above cleaning procedures until the rollers are clean. Be careful not to snag or damage the pick springs.
3. Wipe the pad in the direction from top to bottom. Be careful not to hook the pick springs.
4. Close the ADF unit. Your Scanner is now ready for use.





9.3.2 REPLACING THE ADF SNAP-IN PAD MODULE

After scanning approximately 20,000 pages through the ADF, the pad may be worn out and you may experience problems with document feeding. In this case, it is highly recommended to replace the pad module with a new one. For ordering the pad module, please consult your nearest dealer and follow the procedure below to replace it.

Disassembling Procedure

1. Gently open the ADF front cover to the left.
2. Press both arms of the ADF snap-in pad module inwardly with your two fingers to pull out the ADF snap-in pad module.



Assembling Procedure

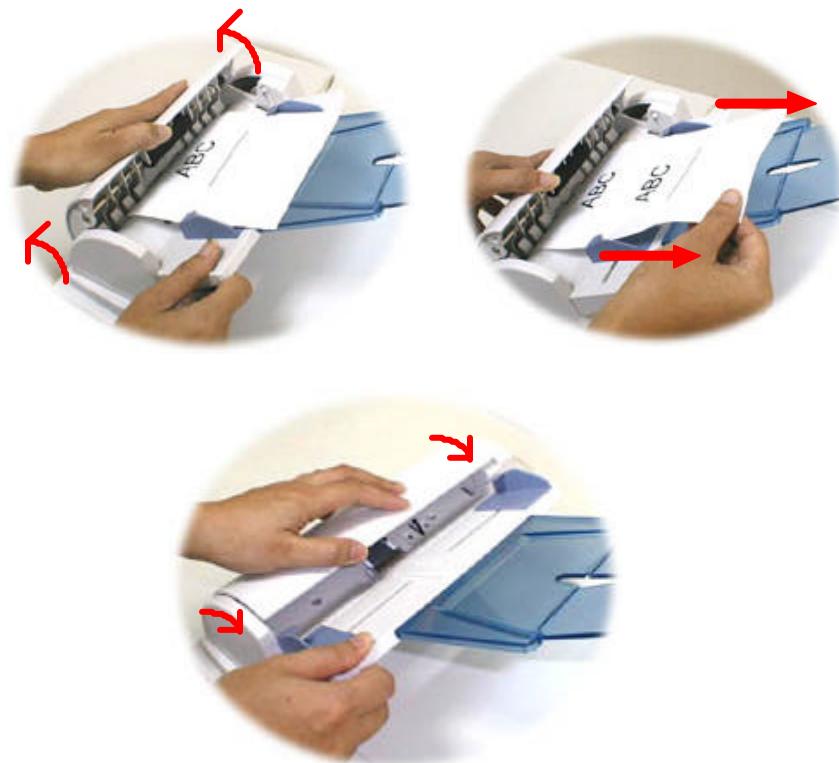
1. Take out the ADF pad module from the box.
2. Press both arms of the ADF snap-in pad module inwardly with your two fingers
3. Place it into the holes until it snaps into place.



9.4 HOW TO CLEAR THE PAPER JAM

In the event of a paper jam, follow the procedures below to remove the paper:

1. Turn the SC-110 off by disconnecting the power cable.
2. Gently open the ADF front cover to the left.
3. Carefully pull the paper out of the ADF unit.
4. Close the ADF front cover.
5. Turn on the SC-110 by reconnecting the power cable. Your SC-110 is now ready to use.



9.5 ADF SPECIFICATION

Dimension	446 x 294 x 200 mm
Weight	1.4 kgs
Speed	10 PPM (page per minute) (mono mode)
Paper tray capacity	25 pages
Document size	Max: Legal size (8.5" x 14") Min: 4.5" x 5.5"
Document thickness	0.07~0.15 mm